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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,304	02/05/2002	Shoji Hinata	9319S-000323	9656

27572 7590 07/01/2003

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 07/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/068,304

Applicant(s)

HINATA ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 6 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sekiguchi, USPAT 6,084,650.**

5. Sekiguchi discloses and shows in Fig. 2, a liquid crystal display device comprising:

- a liquid crystal (16) arranged between first (1) and second substrates (6);
- a signal electrode (2) made of tantalum (col. 2, lines 26-27) (applicant's reflective conductive film) formed on the first substrate (1);

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- a non-linear resistance layer (3) made of tantalum oxide (col. 2, lines31-32) (applicant's light transmitting metal oxide film) laminated on the reflective conductive film so that the edge of the metal oxide film is in contact with the first substrate; and
- a light source (applicant's illumination means) irradiating the liquid crystal with light from outside the first substrate (not shown).

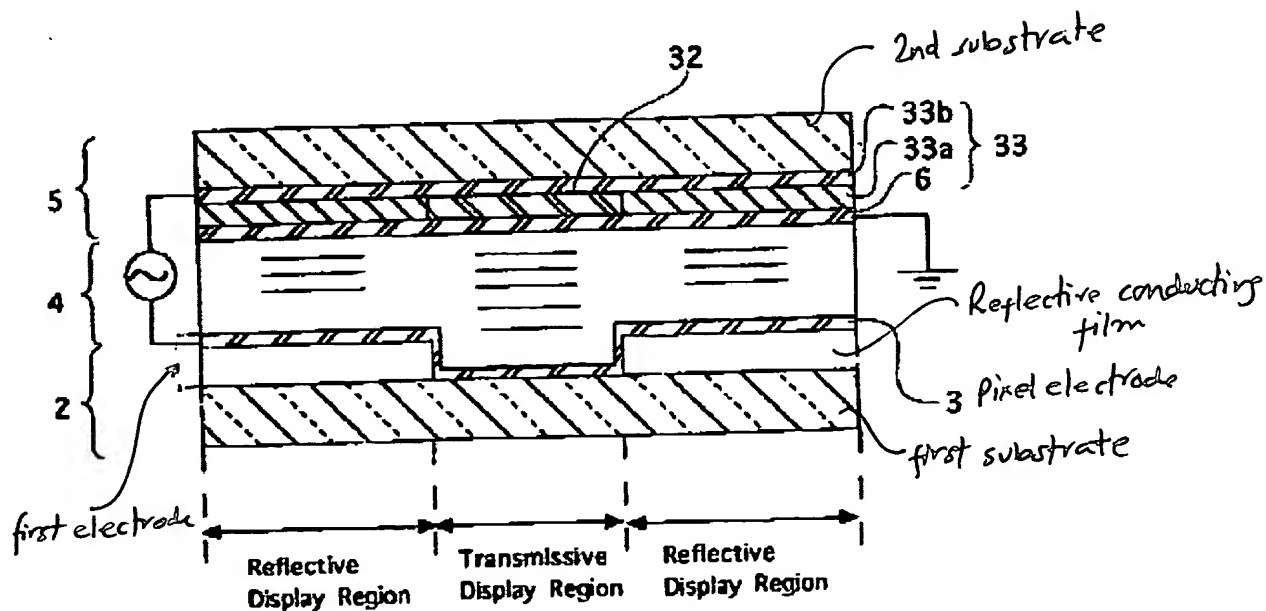
Accordingly, claim 1 is anticipated.

**6. Claims 1-4, 7-9 and 13-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kubota et al., (Kubota), US 2002/0171792.**

7. Kubota discloses and shows in Fig. 7, a transfective liquid crystal display device comprising:

- a liquid crystal arranged between first and second substrates;

**Fig. 7**



- a reflective conductive film formed on the first substrate;
- a pixel electrode (3) (applicant's light transmitting metal oxide film) (page 4, paragraph 0055) conductive film so that the edge of the metal oxide film is in contact with the first substrate; and
- a light source (applicant's illumination means) irradiating the liquid crystal with light from outside the first substrate (not shown) (page 8, paragraph 0106).

Accordingly, claims 1 and 3 are anticipated.

As to claim 7, Kubota also shows in Fig. 7 that the reflective conductive film and the metal oxide form a first electrode for applying voltage to the liquid crystal layer.

As to claim 8, Kubota also shows in Fig. 7 that the device further comprising a second electrode (6) formed on the second substrate opposite to the first electrode, and a color layer (33a) provided corresponding to the crossing regions between the first and second electrodes.

As to claim 9, Kubota also shows that the first electrode comprises stripe electrode constituting a simple matrix system liquid crystal device.

As to claim 13, Kubota discloses that the metal oxide film is made of ITO (page 0063).

As to claim 14, it is clear from Fig. 7 of Kubota that the area of the edge in contact with the first substrate is between 10-70%, preferably 30 to 50% of the area of one display dot to which the edge belongs.

As to claim 16, since the method of manufacturing the liquid crystal display

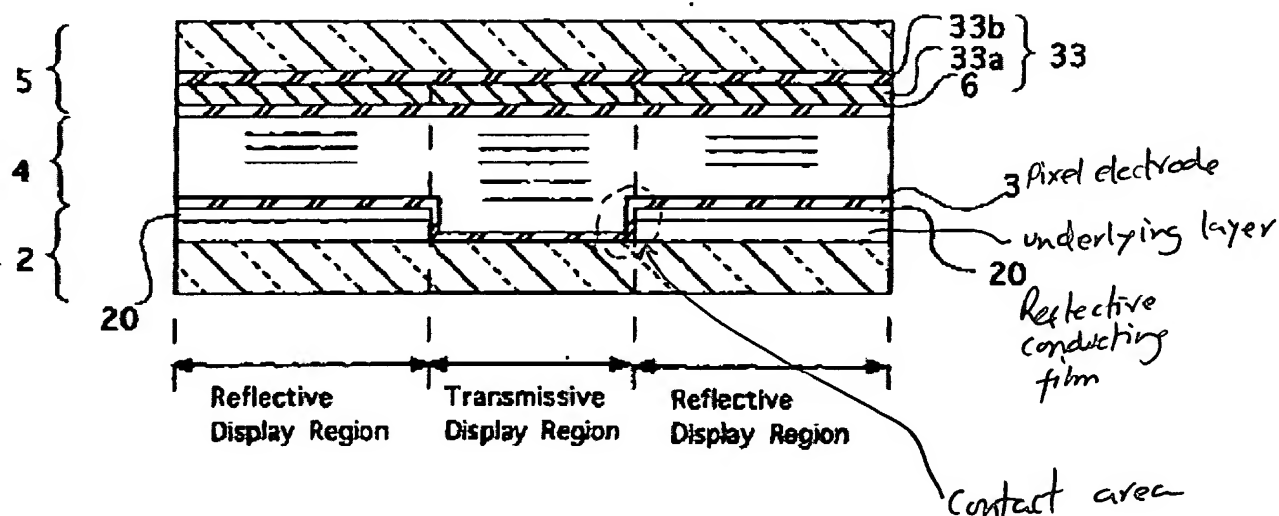
device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

As to claim 18, Kubota discloses that the display can be used in a personal digital assistant device or in a television (electronic apparatus) (page 6, paragraph 0075).

As to claim 2, Kubota shows in Fig 8, a transfective liquid crystal display device comprising:

- a liquid crystal arranged between first and second substrates;

Fig. 8



- an underlying layer provided on the first substrate;
- a reflective conductive film (20) formed on the underlying film;

- a pixel electrode (3) (applicant's light-transmitting metal oxide) film laminated on the reflective conductive film (20) so that the edge of the metal oxide film (3) is in contact with the underlying film; and
- a light source (applicant's illumination means) for irradiating the liquid crystal with light from outside the first substrate (not shown).

Accordingly, claims 2 and 4 are anticipated.

As to claim 15, it is clear from Fig. 8 of Kubota that the area of the edge in contact with the first substrate is between 10-70%, of the area of one display dot to which the edge belongs.

As to claim 17, since the method of manufacturing the liquid crystal display device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**10. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota as applied to claims 1-4, 7-9 and 13-18 above.**

11. As to claim 10, using the liquid crystal display device in an active matrix system is common and known in the art and thus would have been obvious to reduce cross talk.

As to claim 12, forming a reflective conductive film from a single silver layer or an alloy containing silver is common and known in the art and thus would have been obvious to avail a proven material (see class 349, subclass 113).

### ***Double Patenting***

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2, 5 and 17 are provisionally rejected under the judicially created doctrine



of obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 09/865,046. Although the conflicting claims are not identical, they are not patentably distinct from each other because using an illumination means for irradiating the liquid crystal with light from outside the substrate in a transfective liquid crystal display is common and known in the art for having a brighter display in dark environment and thus would have been obvious. Further, as to claim 17, since the method of manufacturing the liquid crystal display device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

13. Claims 6 and 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 6, the prior arts of record do not anticipate or render obvious to one skilled in the art a liquid crystal display device comprising various elements as claimed, more specifically a reflecting layer being provided on the reflective conductive film for reflecting blue component light.

As to claim 11, the prior arts of record do not anticipate or render obvious to one

skilled in the art a liquid crystal display device comprising various elements as claimed, more specifically, wiring connected to the first electrode and the second electrode wherein a display area comprises a collection of the crossing of the first and second electrodes, the wiring connected to the first electrode and the wiring connected to the second electrode are present outside the display area, and at least one of the wirings comprises a metal oxide to eliminate the reflective conductive film

### ***Conclusion***

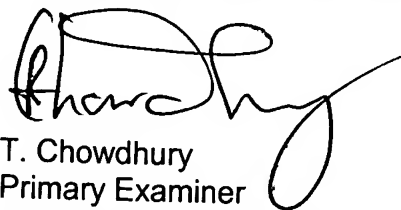
15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) USPAT 5,990,995 discloses a liquid crystal display wherein an insulator layer is formed between a reflection layer and a transparent electrode.
- b) USPAT 6,466,280 discloses a transfective liquid crystal display wherein a transmitting metal oxide is formed on the substrate and a reflective conducting material is formed on the metal oxide film with an insulating layer therebetween.
- c) USPAT 6,452,654 shows in Fig. 49B a structure for a transfective liquid crystal display wherein a transmission electrode is laminated on the reflective conducting plate with the edge of the transmission electrode touching the substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury  
Primary Examiner  
Technology Center 2800

TRC  
June 12, 2003